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**CHEMICAL WARFARE MATERIEL
(CWM)**

**Hazardous Waste or Ordnance?
When Does It Matter?
Who Is In Charge?**

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INTRODUCTION

A problem has arisen within the Army Corps of Engineers on the above issue. There are two written legal opinions within the Army, one from the Army Material Command and one from the Office of General Counsel. These opinions state that chemical munitions recovered from formerly-used defense sites are hazardous waste and therefore, all RCRA emergency provisions should be followed in Emergency Ordnance Disposal actions. This paper will highlight why this classification causes conflicts to arise when dealing with the chemical materiel, and how some environmental programs are and could be impacted in the future. This is a Department of Defense issue that needs to be reconciled now.

SOME DEFINITIONS

Army Regulation 50-6 defines chemical surety materiel as: Chemical agents and their associated weapon systems, or storage and shipping containers that are either adopted or being considered for military use. Chemical surety materiel is categorized as follows:

a. Category I -- bulk nerve agents stored in 1-ton containers, neat rounds (nerve and non-nerve), mines, rockets and bombs, less those items described in categories II, IV, and V below.

b. Category II -- chemical surety materiel in an approved demilitarization program and/or recovered from Army installations or the civilian community.

c. Category III -- binary munitions with both components.

d. Category IV -- bulk non-nerve agents stored in 1-ton containers, except that approved for demilitarization, or RDTE [research, development, test, and evaluation], surveillance or training.

e. Category V -- chemical surety materiel used for authorized RDTE projects, specific surveillance programs, intelligence evaluation or scheduled training programs. Chemicals not listed as chemical surety materiel in appendix C are not covered by this regulation.

WHY IS THIS A PROBLEM?

The Defense Environmental Restoration Program was established under 10 U.S.C. 2701 et seq. That program addresses the remediation of sites that have been contaminated by the Department of Defense, both current (active) sites and formerly-used sites (FUDS). The Corps of Engineers has been designated as the agency to investigate and identify FUDS where contamination exists. The three types of contamination that might be present are: (1) unsafe debris; (2) hazardous and toxic waste (HTW); and (3) other contamination such as unexploded ordnance and explosive waste (OEW). Within the Corps, the Huntsville Division has been designated the Mandatory Center of Expertise (MCE) to deal with OEW problems. The Missouri River Division (MRD) has been designated the MCE to deal with HTW.

Under section 300.120 of the National Contingency Plan (NCP), the Environmental Protection Agency (EPA) and the United States Coast Guard are the response authorities for HTW contamination and oil discharges. The Department of Defense (DOD) has been designated the removal response authority for incidents involving DOD military weapons and munitions or weapons and munitions under the jurisdiction, custody or control of DOD. By classifying CWM as hazardous waste, the response authority is not DOD. However, under Army regulations, only the Technical Escort Unit (TEU) within the Army Material Command (AMC) can transport and/or dispose of chemical agents/munitions. Licensed HTW contractors are not familiar with the properties of CWM and have not been trained in the proper precautions that need to be taken when dealing with chemical agents/munitions.

Under the various AR's dealing with chemical agents/munitions, there are particular security precautions which must be followed, such as double fencing, and 24-hour guards. These chemical agents are lethal substances. The fact that some of them have been buried for 40 years have

not changed that characteristic. The potential for these to fall into the hands of a terrorist is real. This issue needs to be settled before that situation occurs.

RECOMMENDED PROCEDURES

Chemical agents/munitions are by their very nature hazardous substances. They are lethal. This is the reason that one agency, TEU, has been designated by DOD to handle this stuff. No one wants Mr. HTW Contractor to even be in the vicinity when this materiel is neutralized, treated, transported, etc. Handling this materiel requires special knowledge that only TEU possesses.

If we can classify discovered chemical agents/munitions as ordnance, then DOD will be the proper removal response authority and TEU can come in and do their job. The Army Regulations will control the procedures. TEU can conduct its response as an emergency disposal, which is defined in AR 50-6 as: Immediate transportation and disposal of chemical agents/munitions when the senior explosive ordnance disposal person determines the health or safety of any person is clearly endangered. Emergency disposal operations may be conducted free of the prior approval restrictions imposed by Public Laws 91-120, 91-121, 91-441 and this regulation. Explosive ordnance disposal is the detection, identification, field evaluation, rendering safe, recovery and final disposal of unexploded explosive ordnance or munitions chemical agents.

Why would this be the recommend approach? The biggest concern with discovered chemical agents/munitions is the safety hazard it poses in an uncontrolled situation. If a container ruptured and was in a populated area, there could be a death. This is not an acceptable risk. When chemical agents/munitions are "discovered", the TEU should be able to come in, assess the situation, neutralize on site, or transport to the nearest installation that is authorized to accept CWM.

If CWM is discovered, and because it has been buried, it must be classified as HTW, there are certain procedures that come into play if it needs to be transported off site. This is where the biggest conflicts arise within the regulatory arena. Obtaining a Department of Transportation

permit to transport HTW is not a problem. The problem is having a destination that can accept it. There are facilities throughout the country that are permitted to accept HTW for storage or disposal. However, none of these HTW facilities have permits in place that can accept chemical agents/munitions, because these are ordnance items, not normal HTW products.

There are 8 U.S. Army installations with chemical surety missions. Why couldn't the discovered chemical agents/munitions be taken to these installations? The reason is that once they are classified on site as HTW and manifested as such on the DOT transportation permit, the installations are not licensed to receive HTW. The installation commander would be violating the RCRA permit issued to the installation.

Safety should be the priority when dealing with chemical agents/munitions. Because of the nature of CWM, a special unit has been designed to deal with it. The TEU personnel are individuals technically qualified and properly equipped to accompany designated materiel which requires a high degree of safety and security during shipment. (CWM is to be transported by air).

The goal when CWM is discovered is to neutralize it. This is defined as the act of altering the chemical, physical, and toxicological properties to render the chemical agent ineffective for use as intended. Neutralization is one method of demilitarization of these agents/munitions. Demilitarization is the mutilation, destruction, or neutralization of chemical surety materiel, rendering it harmless and ineffectual for military purposes.

One of the rationales given in the two legal opinions mentioned in the introduction is that this is waste because it has been buried. The implication being that DOD could never anticipate using this again. However, before DOD can abandon chemical agents/munitions, the regulations clearly state that they must be demilitarized. Perhaps forty years ago the need to demilitarized existed, but the knowledge did not. That has changed. Also, we are required by the Defense Environmental Restoration Program to seek out and clean up wastes we left behind, and one of the three categories of waste is ordnance.

One of the other rationales for wanting to classify chemical agents/munitions as waste is that because the removal of same is a planned action that an emergency does not exist. It would seem that the contrary would apply here. If CWM is discovered, the removal of that must be carefully planned due to the nature of the materiel. Some of these materiels are lethal in small quantities. There are no warning signals for some agents, and no antidotes. If careful planning were not done, a disaster could be the result.

SUMMARY

This may not seem like an issue that could have far reaching effects. However, under the DERP-FUDS, there are potentially 200 sites that could have buried CWM. If it is classified as HTW, there are problems with who can remove it and where can you take it once it is removed. If classified as OEW, the Army has procedures and safeguards in place that can swiftly, safely and efficiently handle the problem. The only step the Army needs to take is to have the installations with CSM missions amend their RCRA permits, so that this discovered CSM, once at their installations and properly classified, will not violate their reporting requirements.

For existing chemical stockpiles, or even for CWM that is discovered on active installations, these problems do not arise. The CWM is treated as being actively owned and controlled by the DOD. This problem is manifested when the CWM is discovered buried at sites formerly used by the DOD. It would seem like the logical conclusion would be to treat the item the same regardless of where it is located. A bomb is a bomb. Chemical agents/munitions are just as lethal outside of the installation's fence as they are inside the fence. The concern should be to remove or demilitarize the discovered agents/munitions as quickly and safely as possible, minimizing any threat to the safety of persons or surrounding environment. The Army regulations allow this to happen. Since DOD is the removal response authority for weapons and munitions under the NCP, we should let them handle these situations accordingly.

CHEMICAL AGENTS/MUNITIONS

	IF HTW:	IF OEW:
Response authority:	EPA	DOD
Permits required:		
For transport	DOT	None
For storage >90 days	RCRA	None
Security	none	maybe
On-site disposal	None	None
Off-site disposal	RCRA	None*

*The agents/munitions would be transported to an installation with chemical surety mission. Upon receipt, the items would be classified and the installation would be responsible for any permit requirements.

CHEMICAL AGENTS/MUNITIONS

Where can it be taken?

If classified HTW -- UNKNOWN*

If classified OEW -- an installation with CSM mission.

*Disposal of HTW must be at landfill or disposal facility licensed for that particular type of waste. The author of this paper does not know of any HTW disposal facility licensed to handle undiluted CSM. Once CSM has been demilitarized into non-lethal components, there are probably facilities that can handle that non-lethal waste.

PROPOSED OR RECOMMENDED RESOLUTION

1. Have on-scene coordinator (TEU) recognize CSM as OEW.
2. Have the U.S. Army installations with a CSM mission amend their RCRA permits to allow them to accept CSM discovered in the civilian community that cannot be taken care of on-site.
3. If it cannot be neutralized or remediated on-site, TEU should transport to nearest installation with CSM mission.
4. Once safely transported to an installation, all permit requirements, etc., will be satisfied by installation.